

## Some social-relational correlates of student engagement in portugal

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### Abstract

This study, part of a larger, national project, focused on some of engagement's social-relational correlates. Our objective was to study student engagement in a Portuguese sample of students in order to refine the knowledge base. A national sample of students in Portugal responded to a questionnaire while in their class groups. A total of 685 students provided data for the study. The data collection instrument was the "Students' engagement in school: A four-dimensional Scale" EAE-E4D (Veiga, 2013). This scale revealed four dimensions: cognitive, affective, behavioural and agency. In addition, measures of perceived parental support (eight items), and several social-relational variables suggested by the literature were included. Student attitudes about grades (marks) were evaluated by the item, "grades are the principal motive for my interest in school". Less than one third of the students (27%) indicated any disagreement with the affirmation. The most highly engaged students tended to give extreme, and opposing, responses, to this item. Perceived Parental Support was significantly associated ( $p < .001$ ) with all four dimensions of engagement (ranging from  $r = .35$  with the cognitive dimension to  $r = .22$  for agency). The association with total engagement was  $r = .44$ . As a general tendency, mean values of perceived parental support decreased from grade 6 through grade 9 (all tests significant at  $p < .05$ ). Students tended to disagree that class size was a factor in their engagement. The results extend the knowledge about student engagement in school. Some

observations are consistent with the international literature. Parental support is a factor in student engagement. Perceived parental support generally tends to decline over time in the transversal adolescent sample. Contrary to some international findings, student responses indicated that class size was not perceived as a direct factor in their engagement. Student engagement cannot be considered a simple continuum with monotonic effects and should be examined in function of intrinsic and extrinsic valence.

**Keywords:** Engagement, Students, Parents, Portugal

## 1. Introduction

Questions abound about the nature, antecedents and consequences of student engagement (Christenson, Reschly, & Wylie, 2012). At the level of theory, several questions stand out: Is engagement a trait or a state (Bempechat & Shernoff, 2012)? Should its role be that of an explanatory construct or is it better viewed as a practical measure of educational accountability (Axelson & Flick, 2010)? How are motivation and engagement similar concepts and how are they different (Bempechat & Shernoff, 2012)?

Among these diverse questions, there is one point on which all agree: Engagement is important. It appears to be associated both with achievement and with staying in school (Fredricks, Blumenfeld, & Paris, 2004).

In this brief paper, part of a larger study in Portugal, we examine literature and national data in order to explore the relations between student engagement in school and factors of the socio-relatedness context. An examination of recent literature leads to a number of general conclusions pertaining to associations among these variables. First we will operationalise, and establish limits, upon the two principle concepts: student engagement and socio-relatedness.

When we refer to the socio-relatedness context, we include dimensions such as parental and family influences, teacher-student relations, and peer relations. These dimensions will necessarily include common variables such as parenting style and may touch on questions related to school bullying. The inclusion of teacher variables in this context should be limited to affective relations with students, in an attempt to avoid confusion of teaching and motivational strategies with socio-relatedness. At a societal level, the student's milieu, including economic, social and cultural status

(ESCS) may be considered, as well as the average, school-wide ESCS in which a student lives and studies.

Student engagement itself has been abundantly defined, though no single all-encompassing definition has yet been generally accepted. In some studies it is treated as a predictor of academic success while in others it takes the form of a dependent variable resulting from a series of other conditioning factors, sometimes including academic success (Reschly & Christenson, 2012). Axelson and Flick (2010) complained of definitions that were “tangled semantically” (p. 41). Early on, Skinner and Belmont (1993) described cognitive, behavioural and affective dimensions of student engagement and these distinctions became standard in the research. Later however, Skinner, Kinderman and Furrer (2009) presented evidence that both engagement, and its theoretical opposite, disaffection, should be studied as separate dimensions and not merely as the extremes of a continuum. They distinguished between the emotional and behavioral components of both engagement and disaffection but concluded that, although the four resulting components could be statistically distinguished, it might make more practical sense to combine them in what Axelson and Flick (2010) referred to as the “messy reality” of student engagement. These authors pointed out a basic inconsistency in definitions of engagement that emphasizes its two common, but different (some would say incompatible) roles: engagement as an accountability measure and engagement as an explanatory construct.

Beyond the three dimensions identified by Skinner and Belmont (1993), new evidence may point to a fourth dimension of engagement. Veiga (2013) described a national study in Portugal that included the validation of an engagement scale, the EAE-E4D. More than 600 students from grades 6, 7, 9 and 10 responded. In addition to the behavioural, affective and cognitive dimensions, the scale revealed a fourth that was termed *agency*. This dimension was connected to a student’s self-perception as an agent of action. High levels of agency mean that a student displays initiative, intervenes in class, seeks dialog with teachers including questioning and making suggestions. The behavioural dimension in the study of Veiga (2013) focused on negative behaviours such as intentional disruption of classes, inappropriate behaviour toward teachers, missing class, and inattentiveness. In this sense, the EAE-E4D may be measuring what Skinner et al. (2009) referred to as behavioural engagement (as agency) and behavioural disaffection (as the behavioural component).

Following the lead of these previous studies, we will treat engagement as a metaconstruct and will not attempt to disaggregate its “messy reality”. We define

engagement as a general index of students' involvement with their learning environments that is aimed at understanding, explaining, and predicting student behaviour in those learning environments (Axelson & Flick, p.41).

A major review of the engagement literature was carried out by Fredricks et al. (2004), who affirmed generally that family, community and cultural variables influenced engagement. However, these authors chose to limit their examination and placed such variables outside the scope of their review, though citing, in passing, earlier research.

In a study conducted at the level of higher education in New Zealand, Zepke, Leach, and Butler (2011) concluded that what they termed "external influences" were not frequently cited by students as important factors in their school engagement. Teacher factors and motivational factors were the most frequently cited while the socio-relatedness context was less often identified by students as a source of engagement. Other "non-institutional" influences had only moderate impact. Family support was one exception, with the authors rating its impact as "substantial" (p. 239). These conclusions are interesting, but the study results are suspect due to a very low response rate.

With this overall context delineated, and with a general caveat that socio-relatedness variables may not be frequently cited by students as conditioning levels of engagement (Zepke et al., 2011), we proceed to consider specific variables and the evidence for their associations with engagement.

## 1.1 Social conditions

Two kinds of social conditions are prominent in the engagement literature: (a) Economic, Social and Cultural Status (ESCS) and (b) Social Incivilities.

Regarding ESCS, the evidence points to a positive association with levels of engagement. Li, Lynch, Calvin, Liu, & Lerner (2011) followed 1,676 young people in a longitudinal study that spanned grades 6 through 8. They observed a positive relation between engagement and ESCS: higher levels of engagement were associated with higher levels of ESCS. Social incivilities are diverse factors that may include simple annoyances such as noisy neighbours or a prevalence of delinquency and graffiti; provocations such as insufficient municipal services (police, rubbish collection);

or frankly criminal acts such as the use and sale of restricted substances in the neighbourhood.

Daly, Shin, Thakral, Selders & Ver (2009) examined these social incivilities as risk factors to school engagement, hypothesizing first that greater incivilities would be associated with lower engagement. They further hypothesized that other protective factors such as teacher, family and peer support might mediate any negative effects observed. Urban adolescents of colour took part in the study ( $N = 123$ ). The results of the study corroborated the first hypothesis but tended to contradict the second. The study adolescents who perceived more neighbourhood incivilities also reported lower levels of school engagement. The perception of neighbourhood incivilities was the only factor that predicted school engagement. Contrary to the second hypothesis, levels of social support perceived by the adolescents did not mediate the effects of incivilities on school engagement.

## 1.2 Parents

Parents influence their children's school engagement (Martinez, 2004). For example, Carter, McGee, Taylor and Williams (2007) related a significant association between family connection and school involvement. Specifically, adolescents with greater levels of connection to their families also showed higher school involvement.

Simons-Morton and Chen (2009) report the results of a large-scale, longitudinal study of trends in engagement, parenting practices and peer affiliation that spanned grades 6 through 9. Seven public, middle schools in the USA participated in the study which assessed 2,453 students at five different times over the study years. With regard to parenting practices, the authors concluded that authoritative parenting (neither over-controlling nor laissez-faire) may have a direct and positive effect on school engagement; they also suggest that an indirect effect may emerge since authoritative parenting discourages the child's affiliation with friends whose behaviour is problematic.

Deslandes and Cloutier (2002) went beyond the question of parenting styles and asked what kind of students will accept parental involvement and what kind of involvement will they accept. The Canadian study examined 872 students in the general age range of 14 to 15 years and concluded that many parental involvement

activities are welcomed by the students. Activities that included the physical presence of parents in the school were not, however, appreciated by students. Support for parental involvement was stronger among the girls in the study. Work orientation was a good predictor of boys' acceptance of parental involvement; Identity was a predictor of girls' support.

Bempechat and Shernoff (2012) examined the diverse ways that parents can influence achievement motivation and student engagement. They propose two mechanisms for parental influence on engagement, one direct and one indirect:

“The first is the strong association between parental relations with their children and overall psychological well-being, which positions parental involvement as a primary protective factor against disengagement. The second is the more direct influence of caring and supportive relationships with parents” (p. 323).

### 1.3 Peers

The longitudinal study of Simons-Morten and Chen (2009) also reports data on peer influences on school engagement. They found that having friends with problem behaviour tends to trump good parenting practices. Parent involvement, expectations, and monitoring were all mediated by the presence of what the authors termed “problem-behaving friends” and what we may call, more simply, bad company.

Li et al. (2011) examined the role of peer support, affiliation with problematic friends, and bullying on school engagement during early adolescence. Perceptions of peer support positively predicted both behavioural and emotional engagement in school; associating with problematic friends and being involved in bullying were associated, negatively, with both.

### 1.4 School factors

Newmann (1992) identified a number of antecedent factors at the school level that may influence engagement. Some highlighted organizational variables included clear school goals, basic fairness of practices; individual support; a caring environment;

a sense of ownership on the part of stakeholders; and a clear connection to the real world. At the classroom level, Newmann suggested that engagement would be enhanced by tasks that are authentic, that permit a sense of ownership, that permit collaboration, that contain a possibility of using various talents, and can be seen as enjoyable.

Data from Blatchford, Bassett, and Brown (2011) imply that a specific organizational variable - class size - may be a factor in school engagement, with larger classes exhibiting lower engagement. More research is needed to clarify these relations and their trans-cultural properties.

### 1.5 Other demographics

In a final general category, we consider associations with age and gender and explore the possibility of a predictable developmental component to the school engagement dynamic.

Li et al. (2011) reported a general tendency for girls to be more behaviourally and emotionally engaged than boys. Daly et al. (2009) included age and gender as moderating variables in order to determine if they influenced the association between risk factors and school engagement. They concluded that age, but not gender, did indeed moderate the relationship between family social support and school engagement as well as that of neighbourhood crime on school engagement. When seen in the light of more data, we may perceive a developmental component in school engagement. Simons-Morton and Chen (2009) also reported that over the course of their longitudinal study school engagement declined while substance use, behaviour problems, and problematic friends all increased. They also noted a decline in authoritative parenting practices. Li et al. (2011) noted that, among the older students, the influences of peer support on engagement strengthened. At the same time, the negative influences of problematic friends strengthened. These tendencies appear consistent with the general literature on adolescence that describes increasing peer influence accompanied by declining parent influence during the adolescent years.

## 1.6 Summary

As a general summary of results we infer that school engagement may be associated with a number of socio-relatedness variables:

- a)** Economic, Social and Cultural Status —higher ESCS is associated with greater school engagement (Li et al., 2011);
- b)** Social incivilities— which are predictive of lower levels of engagement (Daly et al., 2009);
- c)** Parenting style, specifically the authoritative style of parenting, which is characterized by strong parental support and associated with higher school engagement (Simons-Morton & Chen, 2009);
- d)** Sex—other factors being equal, girls may show higher levels of engagement than boys (Li et al., 2011);
- e)** Age—in fact there may be a predictable developmental component, consistent with adolescent development, in which engagement decreases with the onset of adolescence, which is accompanied by increasing peer influence, and reductions in parental influence (Simons-Morton & Chen, 2009);
- f)** Peer support—greater perceived support is associated with greater engagement (Li et al., 2011);
- g)** Class size (Blatchford, Bassett, & Brown, 2011).

Not all of these categories of variables were considered in the study. We will focus attention on parental and peer influences, gender, age and class size.



## 2. Method

### 2.1 Sample

The study was part of a larger, national project. Participants were students in Portugal and included 296 boys and 389 girls. Sampling guaranteed coverage of schools from the different regions of the country. Four school years were included in the sample 6th grade ( $n=138$ ), 7th grade ( $n=170$ ), 9th grade ( $n=197$ ), and 10th grade ( $n=180$ ). Age levels varied from 11 years (12.3%) to 21 years (1 case only). Median age was between 13 and 14 years. Modal age was 15 years (23.1%). As is typical in samples of Portuguese students, there was a higher proportion of girls (56.8%) than boys (43.2%). In this sample, 82.5% of the students indicated that they had never been retained; 12.4% said that they had been retained once; 4.1% admitted two or more retentions.

### 2.2 Material and procedure

A questionnaire was administered that included measures of (a) student engagement, (b) perceived parental support, and (c) additional demographic and social-relational variables.

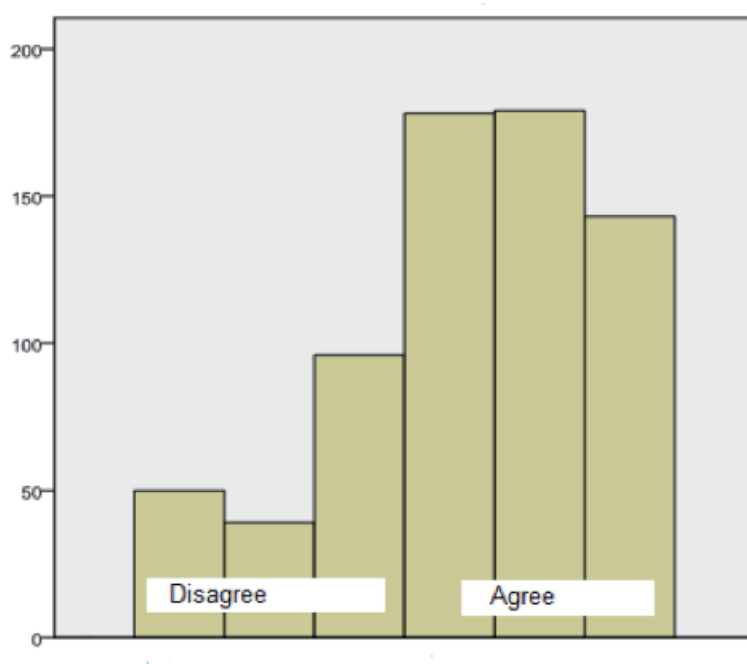
The principal data collection instrument was the “Students’ engagement in school: A four-dimensional Scale” (EAE-E4D, Veiga, 2013). This instrument provides measures of four subdimensions of engagement (cognitive, affective, behavioural and agency) each based on the sum of five responses on a six-point rating scale anchored at the extremes with “total agreement (6)” and “total disagreement (1)” Total engagement is measured by the sum of all 20 items. Internal consistency reliability of the four dimensions varies from  $\alpha = .71$  (Behavioural) to  $\alpha = .85$  (Agency). Total engagement yielded  $\alpha = .83$ .

In addition, perceived parental support was measured by the summation of eight items (all measured on the same six-point response scale described above). Internal consistency reliability of perceived parental support was  $\alpha = .80$ .

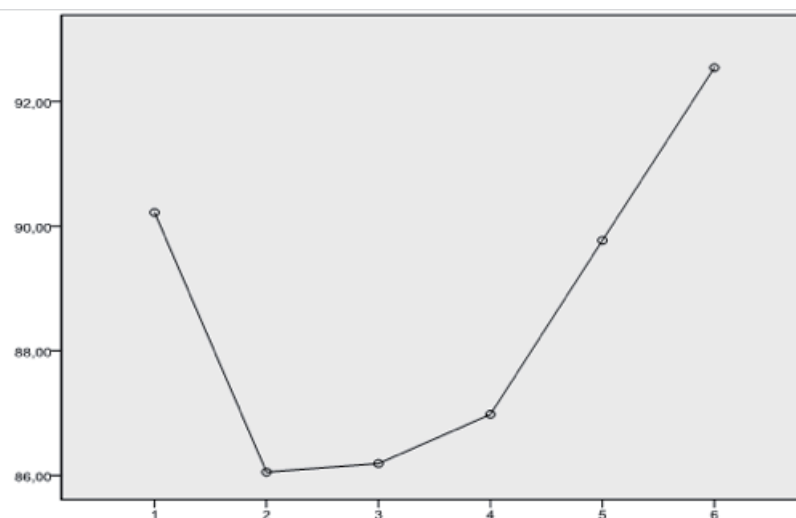
Several demographic and social-relational variables suggested by the literature were included as separate variables. The students responded to the questionnaire while in their class groups.

### 3. Results

As a first step, we asked a validation question: Does the Scale *EAE-E4D* differentiate students who are principally motivated by grades? Figure 1 shows the responses in frequencies to the item “Grades are the principal motive for my interest in school”. A clear tendency toward agreement is evident in the six response categories. Figure 2 shows mean values of total engagement within each of the response categories. While statistically significant differences were encountered among the means, of greater interest is the curvilinear nature of the displayed means. Those responding in the most extreme categories (agree strongly or disagree strongly) have higher mean values of total engagement. Moderate responses to the item were associated with lower levels of total engagement producing the U-shaped curve in Figure 2. Analyses of the subdimensions of engagement all yielded similar U-shaped curves.

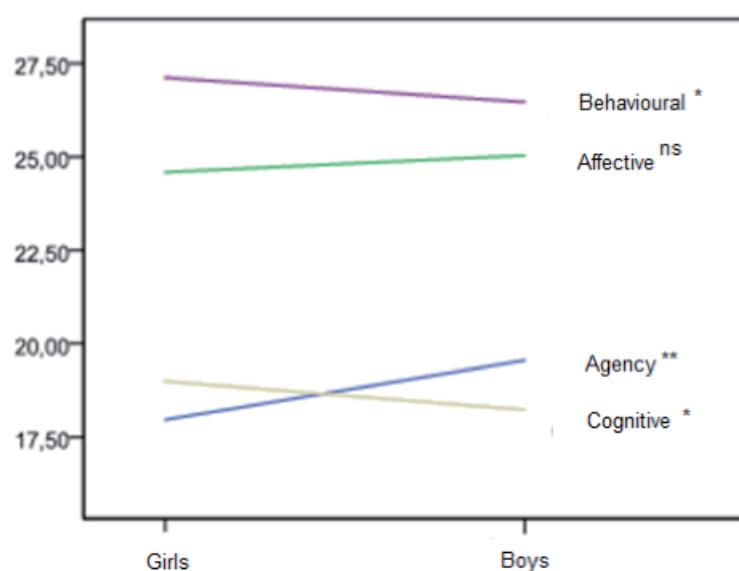


**Figure 1** — Frequencies of six responses categories to the item “Grades are the principal motive for my interest in school”



**Figure 2** — Means of total engagement by six responses categories to the item “Grades are the principal motive for my interest in school”

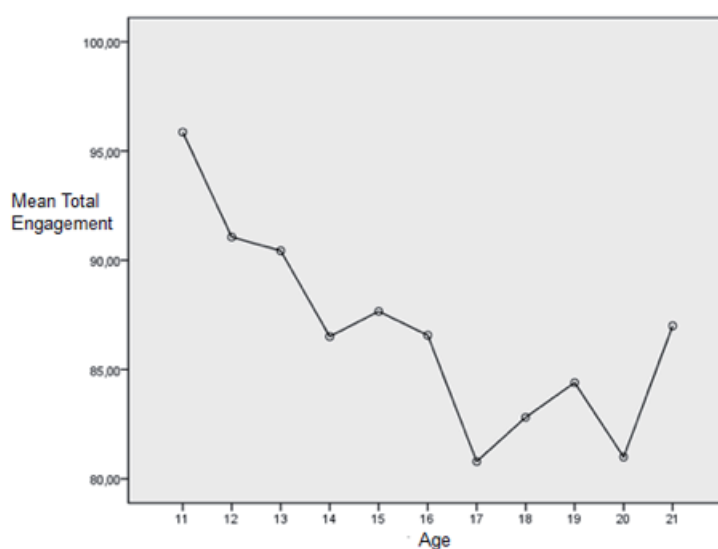
Figure 3 shows the means, by sex, of the four dimensions of engagement. Girls’ mean behavioural engagement and mean cognitive engagement were superior to the boys’ ( $p < .05$ ). Boys’ mean agency was superior to the girls’ ( $p < .001$ ). No statistical difference was observed between the boys’ and girls’ mean affective engagement.



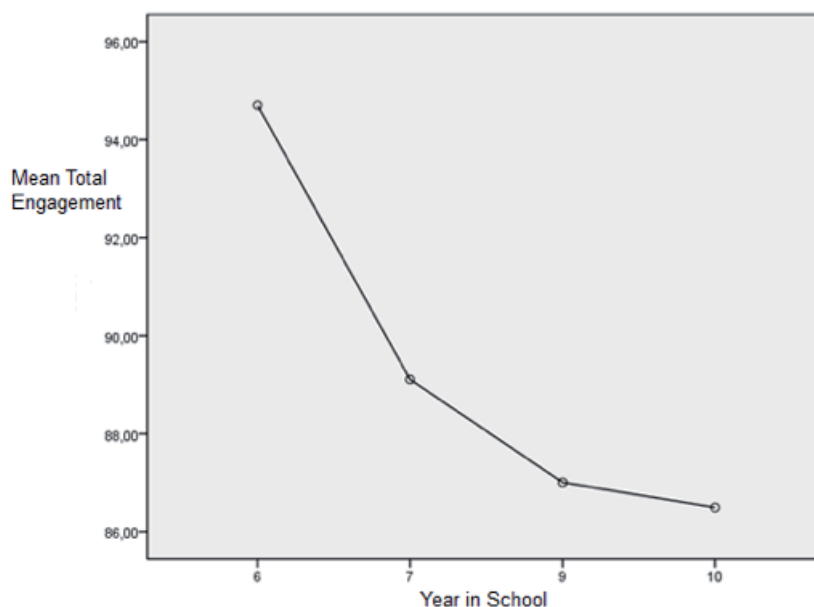
\*  $p < .05$ ; \*\*  $p < .01$ ; ns- not significant

**Figure 3** — Means of four dimensions of engagement by sex

In Figure 4 we present the mean of total engagement by student age. A fairly steady decline is noted from the age of 11 to the age of 17. The number of older students in the sample is quite small and, therefore, the variability observed beyond the age of 17 should not be considered reliable. The decline is also evident in Figure 5 that presents total engagement by school year.



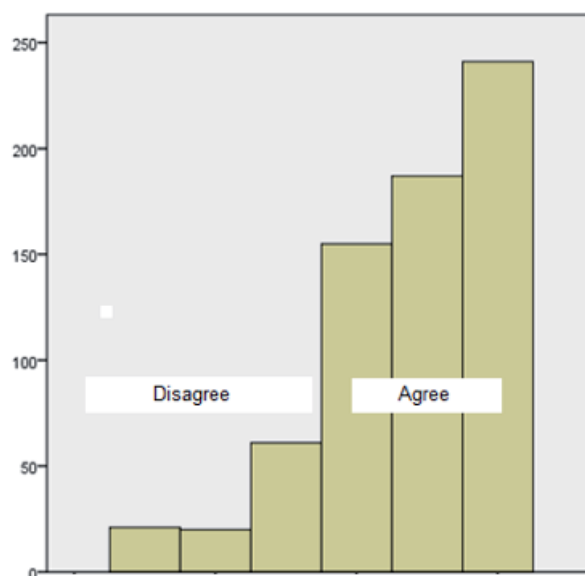
**Figure 4** — Mean engagement by student age



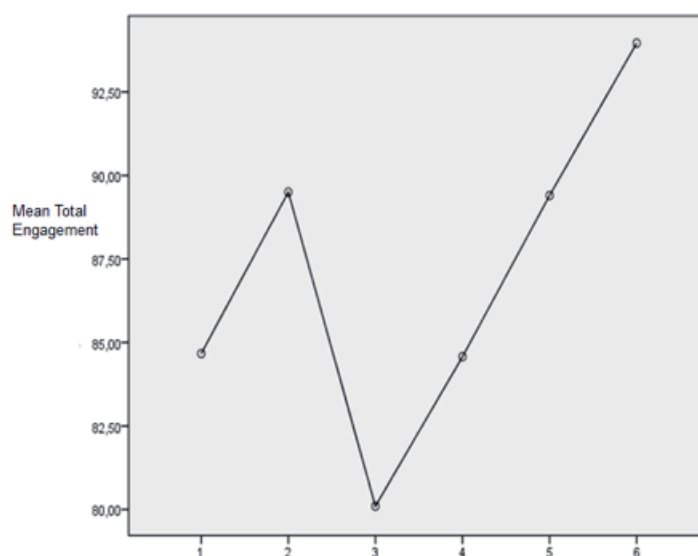
**Figure 5** — Mean engagement by year in school

Figures 6 and 7 explore the question of the association between perceived peer support and engagement. The first is a frequency analysis of the responses to the item “My friends help me out when I need them for school related things.” There is a

strong tendency toward agreement with the affirmation. The modal response is the most extreme “strongly agree”. When engagement is analyzed as a function of these responses (Figure 7), we observe that the lowest engagement is found among those who respond in the middlemost categories.

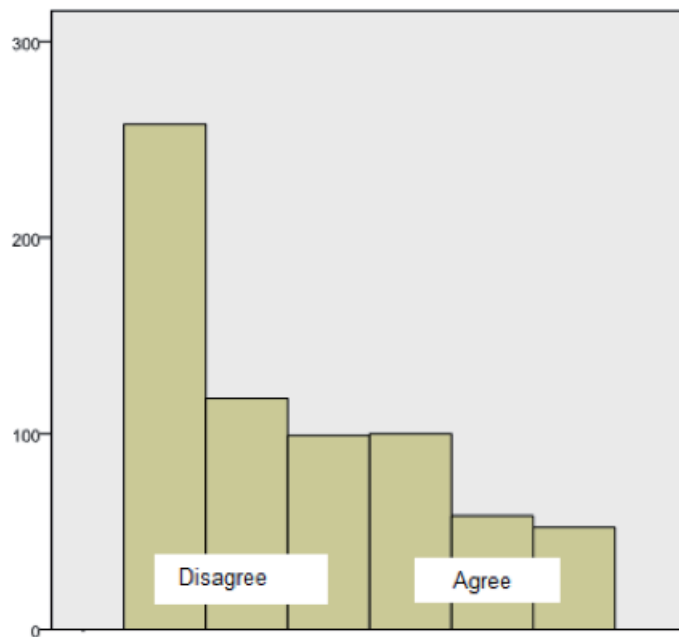


**Figure 6** — Frequencies of six responses categories to the item “My friends help me out when I need them for school related things.”

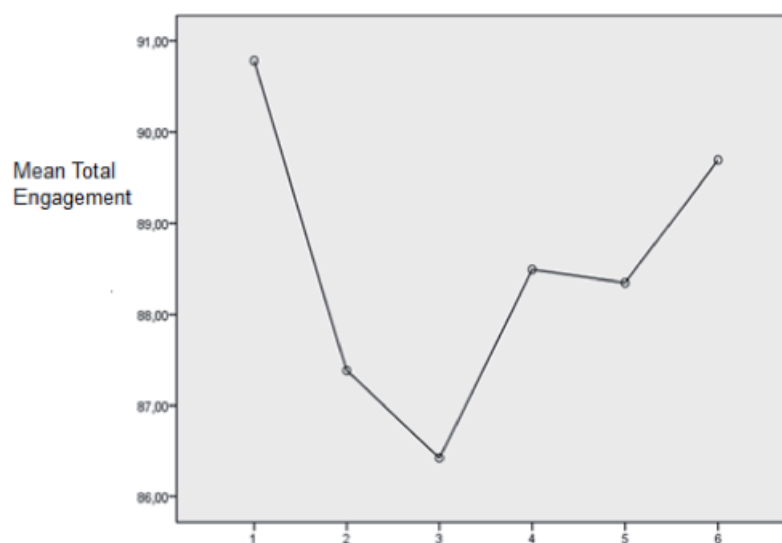


**Figure 7** — Mean total engagement by six responses categories to the item “My friends help me out when I need them for school related things.”

The association between class size and engagement was examined in Figures 8 and 9. The tendency among our sample was to disagree with the statement, “Class size makes difficult my participation in class activities”. Those giving the most extreme responses to this item (strongly agree or strongly disagree) had the highest levels of engagement.



**Figure 8** — Frequencies of six responses categories to the item “Class size makes difficult my participation in class activities”.



**Figure 9** — Mean total engagement by six responses categories to the item “Class size makes difficult my participation in class activities”.

Finally we ask if the perception of parental support is associated with student engagement in Portugal. Table 1 presents Pearson correlations among the dimensions of engagement and perceived parental support. Correlations between perceived parental support and dimensions of engagement were all significant ( $p < .01$ ) and ranged from .22 (Agency) to .35 (Cognitive). The correlation between perceived parental support and total engagement was also significant ( $r_{683} = .44, p < .001$ ).

**Table 1** — Pearson correlations among dimensions of engagement and perceived parental support

	AGENCY	AFFECT	COGNITIVE	BEHAV	TOTAL ENG.
Agency	1				
Affect	.212*	1			
Cognitive	.492*	.177*	1		
Behav.	-.009	.167*	.245*	1	
Tot. Eng.	--	--	--	--	1
Parent Support	.218*	.314*	.350*	.284*	.439*

Note: Correlations between Total Engagement and its subdimensions would be spurious and are not reported. \*  $p < .01$

#### 4. Discussion and conclusions

The results support the discriminant validity of the o EAE-4D scale, but in a way that was not predicted. The U-shaped curves that emerge from the analysis of engagement within response categories indicate that the new scale discriminates among levels of engagement, but that engagement cannot be considered a simple continuum with monotonic effects. Students who are highly engaged tended to respond in the extreme: They may feel strongly motivated by the academic success that is represented by summative grades, or, on the other hand, they may feel no motivation whatsoever from grades. Students choosing to respond in more moderate response categories tended to have lower levels of engagement. The curvilinear nature of the relation implies that observed engagement may be intrinsic or extrinsic in nature.

A similar dynamic was observed in relation to the question about the importance of class size. Some highly engaged students place no importance whatsoever on the size of the class. They are intrinsically engaged and will participate actively regardless

of the specific classroom conditions. Other highly engaged students look closely at the classroom conditions and react strongly to any practical impediment to their learning. Future studies should take this finding into account and ask first, can this finding be replicated and second if it may be a predictable phenomenon based on areas of study (for instance science and technology versus humanities and arts).

We find some support for engagement differences between boys and girls. Li et al. (2011) reported a general tendency for girls to be more behaviourally engaged than boys. Our data, in a Portuguese sample, are in accord with that finding. We also observed superior cognitive engagement among the girls. However, unlike Li et al., we found no evidence for a difference in affective engagement between boys and girls (in fact, the observed nonsignificant difference favoured the boys). Mean agency engagement was superior among the boys.

Our method was transversal and so does not permit strong inferences about longitudinal tendencies. Assuming that there are no strong cohort effects in operation, the implication is that engagement tends to decline over a student's school trajectory measured either by age or by year in school. This is consistent with the findings of Simons-Morton and Chen (2009) and in general accord with the classical literature on adolescence that paints a picture of youth constructing identity by the continuous increase of autonomy.

Is peer support a factor in engagement? Our data do not shed much light on this question. It seems logical that, by definition, friends are those who help us out when we need help. Most students in the sample agreed with the statement, "My friends help me out when I need them for school related things." Engagement is high among those who agree strongly with the statement. But the small number of students who disagree with the statement – even strongly – tend to show higher engagement than those who respond in a more moderate, neutral manner. What can this mean? What does it mean when a student disagrees strongly that friends help her out when she needs help? On the one hand it may mean that the student considers herself superior to her friends and feels she does not need their help. Or it may be a recognition that the student has no real friends. The very nature of friendship looms in the background of this item. Future studies that seek to understand the association between peer support and engagement should consider the implications and search for better ways to measure this relation.

Finally, the data from our Portuguese sample corroborates the international literature that reports a link between parental support and student engagement.



Questions continue about the nature, antecedents and consequences of student engagement. In this brief paper, we examined literature and national data in order to explore the relations between student engagement in school and factors of the socio-relatedness context. We did not include in this study questions of teacher-student relations, nor, at a societal level, the student's milieu, including economic, social and cultural status. These factors may have great importance for student engagement and should be included in future studies of the phenomenon.

#### Note:

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